

with Claim [1] 6, and further including a circuit for equalizing signals upon receipt and before introducing the signals to the [matrix switch] switching matrix.

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3.(Amended) A network, including a user interface for every user and at least one [matrix switch] device as recited in Claim 2, wherein each user interface also includes a circuit for equalizing signals upon receipt of the signals at the user interface from the [matrix] device.

4.(Amended) A network, as recited in Claim 3, and further comprising circuitry to convert signals from common mode to differential mode before sending them out of the [matrix] device over twisted pair wiring.

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6. A device for the simultaneous, bi-directional transmission of video bandwidth signals, comprising:

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Contd
- a plurality of user ports;
 - a plurality of channel up ports;
 - a plurality of channel down ports; and
 - a switching matrix, comprising a plurality of switching points; and

wherein said switching matrix permits the simultaneous, bi-directional transmission of video bandwidth signals between users, between users and up channels, and between users and down channels.